

Another objection which has been raised is due to the claim of Much and Deycke that the partial antigens should be and could be used successfully in all cases of tuberculosis. It is the same mistake that has been made by so many other discoverers of new sera. In our opinion, the use of different tuberculins should always be based on a thorough study of the underlying pathological condition, and this determination is of the greatest importance in the treatment of pulmonary tuberculosis. We are well aware that there are still some schools that object to the treatment with tuberculins in any form, relying only on non-specific treatment such as rest, sunshine, food, x-rays, pneumothorax, where indicated, and other non-specific methods. But these schools are in the minority. I have used tuberculins extensively for a great many years, and I would not like to be without them in the majority of cases.

We divide the pathology of pulmonary tuberculosis into two principal types—the exudative and the productive. The exudative type is that type in which the infection begins in the alveoli, the parenchyma of the lungs. It causes the secretion of serum and leucocytes into the alveoli, and is followed gradually by ulceration and cavity formation. The other, and by far the more favorable type, is the productive type. Starting in the interstitial tissue, it is followed by cirrhosis and scar formation. A purely exudative or purely productive type is, of course, only found in the very first incipency of pulmonary tuberculosis. The more the case is advanced the more the two types become merged, and it becomes more difficult to determine which type is predominant; but this can be done in the majority of cases by clinical observation, x-ray study, and most accurately by immune biological tests.

In the more dangerous type, the exudative, the toxin-free tuberculins are indicated; of these the partial antigens have given us better results than any other. We have used them for the last three years, and with each year our results have become better, as our statistics show. This fact is undoubtedly due to a modification in the treatment. We have not strictly followed the directions of Much and Deycke, but we have used the partial antigens chiefly intracutaneously as Sahli, in Switzerland, has recommended for the Beraneck serum. Also we have, especially in the more advanced cases, confined ourselves to extremely small dosages, in longer intervals, increasing the doses only when we considered it justifiable.

With our increasing knowledge of immunology, we have to realize more and more the great importance of the skin as an organ for the production of antibodies. If we consider the fact that those infectious diseases which are characterized by more or less classical skin eruptions as, chickenpox, scarlet fever, typhoid, smallpox, et al., produce a very definite and lasting immunity, we will realize that the skin must have a good deal to do with this fact.

Time does not permit me today to discuss further the differentiation of the pathology or the theoretical explanations why the toxin-free tuberculins are more indicated in the exudative type, and the old tuberculins in the productive type. Please do not think that we regard the partial antigens as a

specific for pulmonary tuberculosis; on the contrary, we have had our failures as have all others engaged in treating that class of patients.

I am bringing this method before you as having given us the best results, and am presenting, radiographically, some of the cases to illustrate the points I have so briefly mentioned.

THE BAD RISK AND THE SURGEON *

CHAIRMAN'S ADDRESS: SECTION ON GENERAL SURGERY

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Very frequently in our surgical life we are confronted with the problem of a patient whose condition demands operative interference, often of a life-saving character, and yet, for one reason or another, the operation by routine methods is nearly, if not absolutely, contra-indicated.

In the field of making safe the urgent surgery for the "bad risk" patient, Crile has, I think, contributed more than any man or group of men. His practice of the two-stage gastrectomy—the two-stage operation for goitre have been widely discussed and adopted. The giving of great quantities of fluid under the skin—not by the pint, but quart after quart the day before and the day after operation, has undoubtedly saved many lives.

The training of more men to use local anesthesia for major urgent surgery is, I think, an even greater step toward the safety of many patients. I use the word "training" advisedly, for it is absolutely necessary for surgical assistants and operating-room staff to be quite accustomed to the changed conditions of abdominal section under local anesthetic, to have it successful at the time it is needed.

An acutely diseased appendix occurring in the course of pneumonia; perforated gastric or duodenal ulcer in the course of influenza, or even the more elective procedures in upper or lower abdomen in presence of active pulmonary tuberculosis, illustrate the point I am making. All these things are simple and can be done without general anesthetic without discomfort or distress to the patient and without the great mental strain that is so often spoken of, if the whole surgical team is trained in gentleness, deftness, and silence.

To me the greatest boon has been the simplifying of the treatment of the deeply *jaundiced* patient with duct obstruction. Formerly, my mortality was so high that I viewed with terror a yellow skin in office or hospital. We would test for coagulation time—give preliminary blood transfusion and calcium, and do everything in our power to make our patient safe and then go in and remove obstructing stones in the common duct—drain the liver and put our patient back to bed in good condition and feel that we had done a very "slick" surgical procedure. The next day the patient remained in good condition, but the drainage decreased. The following day the pulse began to go up; the patient began to be restless and the drainage became much less. Under the impression that our tube might be stopped, we loosened the tube and drains without avail. The

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bile stopped coming, and on the fifth or sixth day the patient died. This, of course, did not happen every time, but it happened far too often. These patients died from lack of liver secretion due to hyperemia, following sudden relief of pressure, just as the patients with prostate troubles used to die from hyperemia of kidneys, following primary prostatectomy due to sudden relief of pressure on the circulation of the kidneys. The same procedure that has made prostatic surgery safe has also made safe the surgery of biliary obstruction.

Under local anesthetic, the abdomen should be opened and a tube tightly sewed into the biliary tract behind the obstruction—the gall-bladder preferred, if the liver can be drained from there. A clamp placed upon the tube immediately so that the dammed-up bile will not all escape, and the patient returned to bed. Releasing the clamp for one-half to one minute each hour will be enough to keep tension off the stitch line, and slowly empty the liver. It is very interesting to watch the bile lighten from the ordinary black concentrated flow at first to clear mucous on the third day, then slowly return to its normal amber color. When normal bile comes freely, the patient is safe for any radical duct surgery, just as the kidney function established by preliminary controlled drainage of the urinary bladder makes the patient suffering from prostatic trouble safe for radical removal.

A great deal depends upon the relation of the surgeon to his patient—his ability to establish a trust and confidence in his patient which will carry them both by the short interval of time when a viscus is open and it is imperative that the field be unchanged.

"Much of the individuality and personality of the surgeon comes silently out in his operating," says Bickham. "There are manifest his broad or narrow surgical knowledge; his operative technic; his profound knowledge of practical anatomy, or his 'cut-and-tie' method; his knowledge of surgical pathology, or his surprised and nonplussed discovery of unknown or illy understood conditions; his system, or lack of system; his orderliness, or its absence; his reasoning, or his drifting; his action following conviction, or his action determined by accident; his regard for the structures of man, not unnecessarily to harm even connective tissue, or his disregard of all but his preconceived goal, with much needless sacrifice of important parts on the way.

"Operative surgery is, in a sense, applied anatomy; and it is highly satisfying to the surgeon as well as to his onlookers to see the steps of an operation proceed with careful and conservative regard for the anatomic structure of man, with the realization that not a fiber is there to be sacrificed uselessly, though he, in his meager knowledge, may not know its full value and exact function; with the same tenderness of care as though the patient's body were his own body and his structures as valuable as his own. The mechanical side of the surgeon's art should be so instinctively done, and be so free of effort, that the higher, weightier expressions of mind, judgment, decision and its allied manifestations, may have unfettered play spontaneously and not require to be called up by effort. Quickness of

thought, with prompt action upon decision, are desirable; simplicity and directness of personal technic; quietness and calmness under the most trying, as well as under the easiest, circumstances; smoothness and accuracy of detail in the team-work of surgeon and his assistants are all admirable.

"Detail and thoroughness, and conservation of the tissues, should not be sacrificed for speed; nor should dilatoriness of technic, or a wavering mind unnecessarily prolong an operation. It is wiser to operate well than to operate brilliantly; a superlative degree of the former and a reasonable degree of the latter should be the surgeon's aim. Probably many lives have been the direct cost of unbalanced operative brilliancy.

"While the patient is better off in the hands of a timid, painstaking surgeon than in those of a bold, destructive operator, judicious boldness—the boldness that comes of the certainty of knowledge and the certainty of one's self—is a creditable asset to its possessor, and a pleasant sight to those viewing his work. The boldness that comes of ignorance or recklessness cannot be too sweepingly condemned. Timidity in operating is generally an agony to the operator himself; and is only too evident, and an uncomfortable sight to those obliged to witness it. Timidity is practically always an expression (and confession) of ignorance—often an ignorance of surgical pathology, but much more frequently an ignorance of pure (to say nothing of surgical) anatomy; and a pale face, troubled eyes, uncomfortable moisture, cold hands, and cold feet are only too often its outward signs.

"The conscientious surgeon is profoundly affected by the responsibility and seriousness of his role; and to the desirable acquisition of 'the eye of an eagle, the hand of a woman, the heart of a lion,' may well be added the soul of a man."

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Blocking Lymphatics in the Control of Carcinoma of the Prostate Gland—After a careful review of the literature, supplemented by experience, Robert H. Herbst, Chicago (Journal A. M. A.), concludes that the treatment of carcinoma of the prostate resolves itself into a consideration of the following problems: (1) The control of the cancer; (2) the relief of urinary retention, and (3) the obtaining of the best possible function after the cancer has been controlled. In order to accomplish these purposes, Herbst believes that it is essential to open the bladder suprapubically. A suprapubic cystotomy gives the opportunity to accomplish best these three problems. When the lymphatics leading from the prostate gland have been blocked by the action of radium, the malignancy in the gland proper may be taken care of by introducing needles through the perineum, supplemented by urethral and rectal applications. Roentgen-ray therapy is undoubtedly of some value in conjunction with these other methods. In Herbst's opinion, the failure to control the disease in the past has been due, at least in some instances, to the haphazard introduction or application of radium to the malignant prostate. A knowledge of the lymphatic circulation, together with the establishment of good drainage of the urinary tract, is essential to success in the control of the disease. Accuracy, coupled with attention to detail, is as important in the control of cancer of the prostate as in any other surgical procedure.